MISSOURI

Department of Natural Resources



Incident Summary Report

Fiscal Year 2009

(July 1, 2008 - June 30, 2009)

Environmental Emergency Response -Field Services Section

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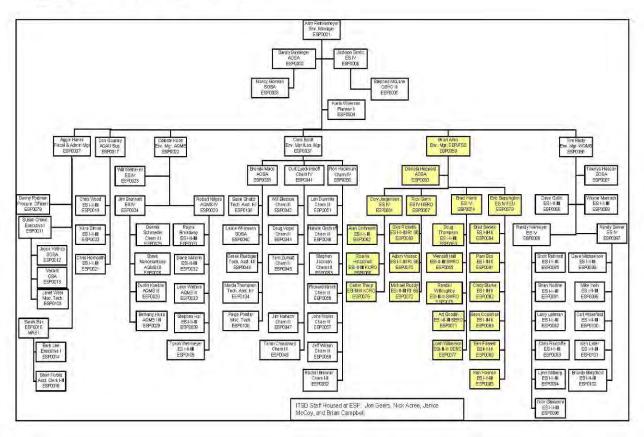
During emergency responses, the goal is to minimize damages and protect the environment, property, and people with the highest priority being on public safety. Emergency Response is the department's front line of defense to significant and imminent hazardous substance releases that impact public safety and the environment.

Emergency Response is responsible for fulfilling the requirements contained in Revised Missouri Statutes, Chapter 260, sections 260.500 through 550, commonly referred to as the "Spill Bill." This responsibility includes the requirements to address any chemical, petroleum, or other material spilled on to the land, water, or atmosphere that may impact the public health and safety and/or the environment. It furthers requires the maintenance of a 24-hour spill reporting hotline, 573-634-2436.

Attachment 1 - Environmental Services Program's Organization Chart



June 16, 2009



Base of Operations

Emergency Response has a total of 23 staff stationed at six different locations throughout Missouri (attachment 2). The manager of the Emergency Response Section and the Administrative Office Support Assistant are stationed in Jefferson City. The core operations are located in Jefferson City where 11 Duty Officers/State On-Scene Coordinators staff the 24-hour spill reporting hotline.

Two State On-Scene Coordinators at each regional location, conduct operations out of the Kansas City Regional Office in Lee's Summit, Southeast Regional Office in Poplar Bluff, and the Southwest Regional Office in Springfield. One State On-Scene Coordinator conducts operations out of the Northeast Regional Office in Macon. Three State On-Scene Coordinators conduct operations out of the Route 66 Emergency Response Office in Eureka (St. Louis Regional Office area).

All State On-Scene Coordinators are dispatched via the 24-hour spill reporting hotline by a Duty Officer in Jefferson City.

Additional information about Emergency Response may be viewed at: http://www.dnr.mo.gov/env/esp/esp-eer.htm

Attachment 2 - Department of Natural Resources Regional Office Map



Newly Acquired Emergency Response, Secondary Emergency Response, and Support Vehicles

A fleet of new Ford Response Vehicles were replaced after Emergency Response was the benefactor of six vehicles through the AmerenUE Taum Sauk settlement (attachment 3). The vehicle utility bodies were custom built by Precision Fire Apparatus in Camdenton and are expected to serve Emergency Response for many years.

Three Secondary Emergency Response Vehicles were replaced with new 4X4 Chevrolet Extended Cab Pickup Trucks (attachment 4) outfitted with emergency lights, sirens, camper shells, and storage boxes. These vehicles are located at Southeast, Southwest, and Kansas City Regional Offices.

In June 2009, Emergency Response replaced an older model truck mounted Geoprobe® with a new Geoprobe® Advance Model 6600 Soil Probing Unit (attachment 5). This new hydraulically powered soil unit can use bigger probe rods, has greater pulling capacity for larger sampling tools and deeper depths, is equipped with a powerful GN62 Hammer, and has a built in rotary spindle for concrete drilling, augering, and anchoring.

Attachment 3 – 2008 Emergency Response Vehicle



Attachment 4 – 2008 Secondary Emergency Response Vehicle



Attachment 5 – Support Equipment GeoProbe® Advance Model 6600



Education and Outreach

The Emergency Response Section works diligently to develop and advance working relationships with local, state and federal partners. Understanding the roles and responsibilities of these various agencies and sharing our mission before environmental emergencies occur in their jurisdictions is beneficial.

It is equally important to educate, inform, and interact with the general public, school children, and other parties to further their understanding of what their role is in protecting the environment and the mission of Emergency Response.

During the past fiscal year, Emergency Response attended 310 different events reaching an estimated 22,752 individuals. This included three different categories: emergency preparedness (238 events/11,178 individuals), workshops/trainings (42 events/1,896 individuals), and public outreach (30 events/9,678 individuals).

Environmental Emergency Response Tracking System

Emergency Response uses a database, commonly referred to as MEERTS (Missouri Environmental Emergency Response Tracking System), as a repository for information related to all hazardous substance emergencies/releases. Information in MEERTS can be queried as far back as December 1993 and is available on the internet in a searchable format at

http://dnr.mo.gov/asp/esp/meerts/select.asp

There are 11 Duty Officers that staff the 24-hour spill reporting hotline 24 hours a day, seven days a week, 365 days a year. During normal business hours Duty Officers staff the Incident Command Center located at the Environmental Services Program. After normal business hours, the spill reporting hotline is answered from the Duty Officers' residence. Information obtained from the spill reporting hotline is entered into MEERTS by Duty Officers.

Environmental Emergency Response Tracking System

Emergency Response recorded 1,912 incidents* in MEERTS during Fiscal Year 2009.

Of the five regional office areas, 1,912 incidents recorded are listed for each as follows (attachment 6):

Kansas City Regional Office (417),

Southwest Regional Office (399),

St. Louis Regional Office (385),

Northeast Regional Office (375**), and

Southeast Regional Office (336).

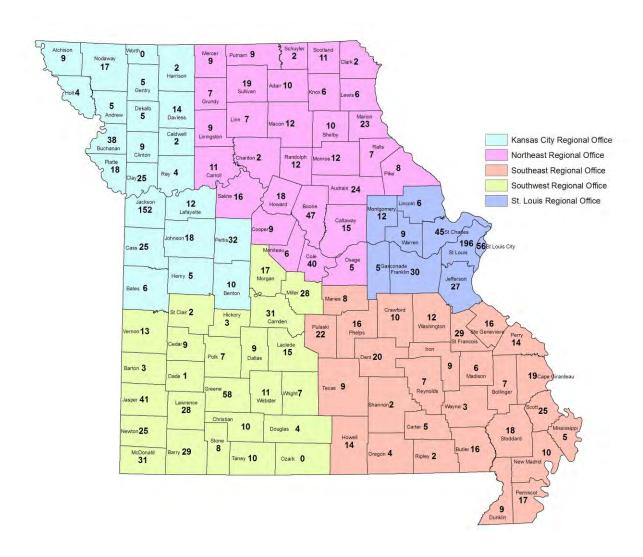
The top five counties in which incidents were reported/received were: St. Louis (196), Jackson (152), Greene (58), City of St. Louis (56), and Boone (47). Only two counties (Ozark and Worth) did not have a recorded incident.

During the last 10 years Emergency Response has received an average of 1,800 reported incidents each year, the lowest amount in 2008 with (1,421) and the highest in 2000 with (2,382) (attachment 7).

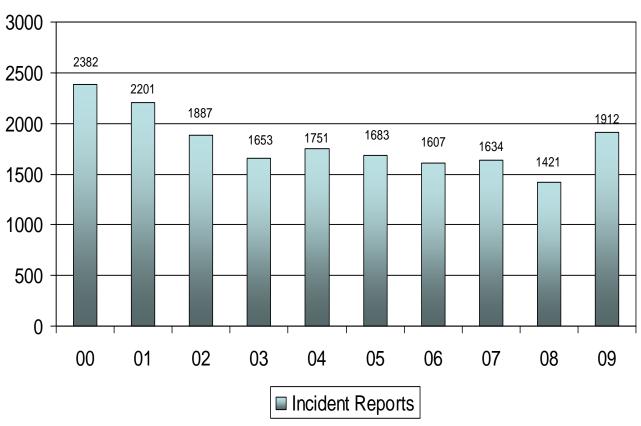
^{*} Excludes meth lab incidents accepted at the clandestine drug lab collection stations

^{**} Includes one out-of-state report received from Lee County, Iowa

Attachment 6 – Fiscal Year 2009 Incident Map



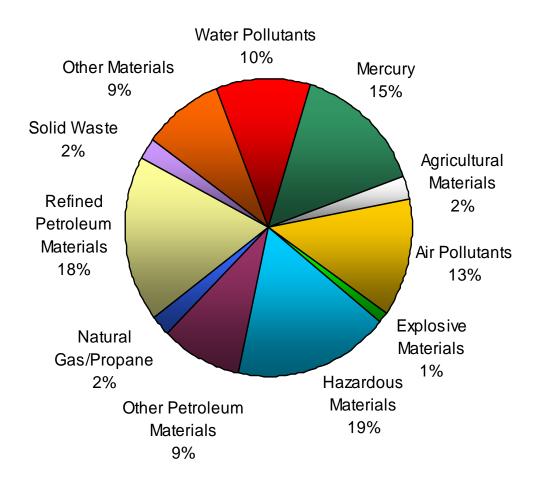
Attachment 7 – Fiscal Year 2009 Incident Map



Fiscal Year

Attachment 8 - FY 2009 Incident Material Categories

All incidents reported to Emergency Response are placed into a material category; some very specific and some more general.



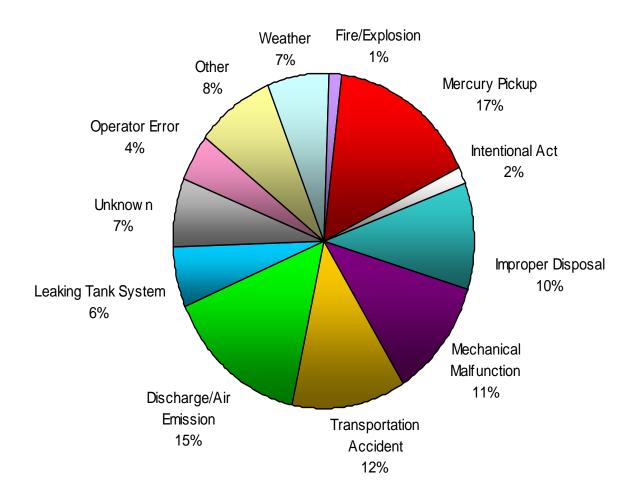
Reference Incident Category Information – Material Category for types of materials released in each category

Material Category

•	Refined Petroleum Products		•	Haz	ardous Materials	
	 Aviation Fuel/Jet Fuel 	5		_	Ammonia – Industrial	195
	Ethanol Product	1		_	Chlorine	6
	Diesel Fuel	242		_	Corrosive – Acid	24
	Gasoline	148		_	Corrosive – Base	7
	 Fuel/Heating Oil/Kerosene 			_	Ethylene Glycol	13
•	Other Petroleum Materials			_	Metals	14
	Crude Oil	2		_	Organic Solvent	24
	Waste Oil	51		_	Other Inorganic Material	22
	Other Petroleum Material	154		_	Other Organic Material	59
•	Natural Gas/Propane	47		_	Paint/Paint Waste	14
	rtatarar Gas/r ropario	.,		_	Hazardous Waste	2
•	Air Pollutants			_	School Lab Chemicals	6
	Freon	3	•	Agri	cultural Materials	
	 Other Air Pollutant 	284		_	Anhydrous Ammonia	20
•	Water Pollutants			_	Fertilizer	9
	Animal Waste	25		_	Pesticide	17
	 Domestic Sewage 	155		_	Other Agricultural Material	
	 Dye Trace Material 	9	•	Othe	er Materials	
	Fire Water Runoff	4		_	Asbestos	16
	 Other Water Pollutant 	42		_	Foodstuff	6
•	Solid Waste			_	Medical Waste	2
	 Other Solid Waste 	25		_	Processed Oil	
	Waste Tires	9		_	Radiological	1 4
•	Explosive Materials	25		_	Homeland Security	1
•	Mercury	334		_	Unknown	120
	,			_	No Material	69

Attachment 9 - FY2009 Incident Cause Categories

All incidents reported to Emergency Response are placed into a category, to the extent possible, as to what caused the incident.



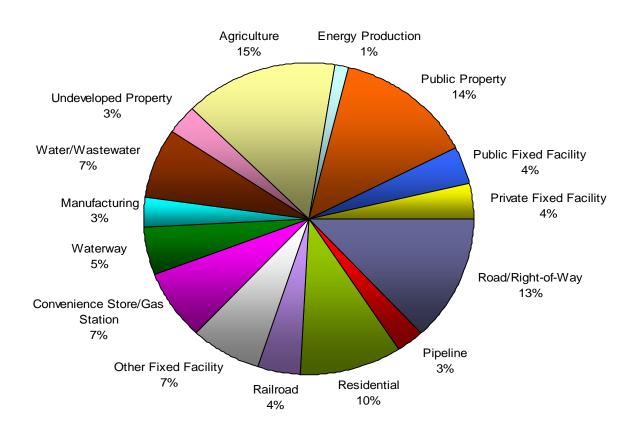
Reference Incident Category Information – Incident Cause for causes of materials released in each category

Incident Cause

•	Transportation Accident					
	Pipeline	9				
	Railroad	26				
	Vehicle	192				
	Watercraft	6				
•	Mechanical Malfunction	217				
•	Discharge/Air Emission	292				
•	Leaking Tank System	112				
•	Improper Disposal	195				
•	Intentional Act					
•	Fire/Explosion					
•	Weather					
•	Operator Error					
•	Other					
	Blockage/Bypass	32				
	 Homeland Security 	1				
	 School Lab Chemical 	s 8				
	 Seepage/Leachate 	5				
	 Ordnance Destroyed 	16				
	Other	93				
•	Unknown/Undetermined	127				

Attachment 10 - FY2009 Incident Property Use **Categories**

All incidents reported to Emergency Response are placed into categories based on property use.



Environmental Emergency Response Tracking System

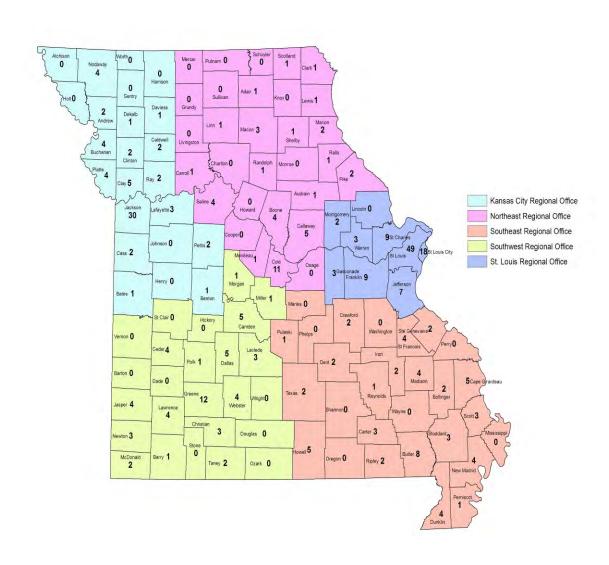
In Fiscal Year 2009, Emergency Response responded to 323 incidents in 79 counties and the City of St. Louis (attachment 11).

Of the five regional office areas, 323 incident responses for each area are as follows: St. Louis Regional Office (100), Kansas City Regional Office (66), Southeast Regional Office (60), Southwest Regional Office (55), and Northeast Regional Office (42).

The top five counties in which on-scene responses were required were: St. Louis (49), Jackson (30), City of St. Louis (18), Greene (12), and Cole (11). Thirty-five (35) counties did not encounter an incident that necessitated an on-scene response from Emergency Response.

Several environmental emergencies have been chosen to illustrate the types of on-scene responses made by the Environmental Response Team.

Attachment 11 – FY 2009 Incident Response Map



Response Capsule



Jasper County Carthage 0807080519EJS

A tractor trailer loaded with gasoline and diesel fuel overturned in a road ditch releasing several hundred gallons of gasoline. The gasoline permeated a buried water line contaminating the drinking water supply. A State On-Scene Coordinator worked diligently over an extended period of time to bring this incident to closure.

Response Capsule



Warren County Warrenton 0807300800DLT

Chemicals from a methamphetamine lab created problems for law enforcement while serving a search warrant. Assistance was requested for a State On-Scene Coordinator and a state hazardous materials response contractor to address the hazards at the site of the meth lab.

Response Capsule



Cole County Jefferson City 0808050915DLT

A maintenance facility did not have good housekeeping practices of their stored drums of paint which resulted in a release to a storm drain. The yellow paint entered a main drainage way running through downtown contaminating the water. A State On-Scene Coordinator oversaw response and cleanup actions.

Response Capsule



St. Louis County Fenton 0808071426ZDD

State On-Scene
Coordinators
investigate a report
of abandoned drums
along Interstate 44.
Drums are opened
carefully and their
contents screened to
determine
hazardous
characteristics prior
to removal and
proper disposal.

Response Capsule



Callaway County Reform 0808271702BWH

During construction operations at a nuclear power plant, a cooling water discharge pipe ruptured. A State On-Scene Coordinator responded to work with company officials to evaluate the potential release of radioactive material to the environment.

Response Capsule



Linn County Brookfield 0809261100PAB

Vandals broke into an abandoned high school's chemistry lab storeroom and stole old chemicals including arsenic and mercury. The vandals were apprehended, but a State On-Scene Coordinator took additional actions at the building to secure and properly dispose of the unsafe chemicals.

Response Capsule



Henry County Calhoun 0810301715BJA

A State On-Scene Coordinator carefully overpacks glass vials of chloropicrin (tear gas) that were discovered in a safe at city hall.

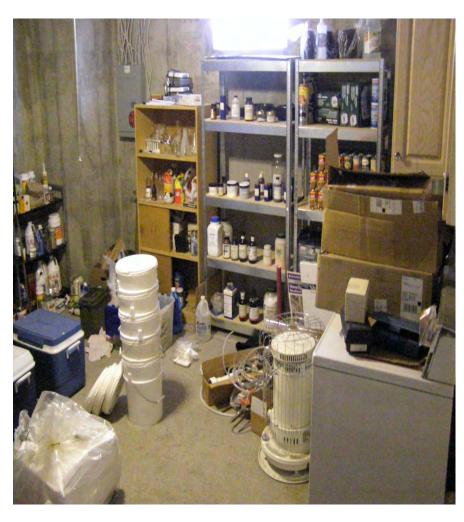
Response Capsule



Greene County Springfield 0901211030PAB

An accident involving a tractor trailer resulted in both saddle tanks being compromised. Over 200 gallons of diesel fuel flowed from the overpass to a street below resulting in extensive contamination. A State On-Scene Coordinator worked closely with a hazardous materials contractor to conduct a cleanup.

Response Capsule



St. Charles County St. Charles 0901301253BWH

Laboratory grade explosive reagent chemicals and explosive materials were discovered during a search warrant of a private residence. A State On-Scene Coordinator worked with the responding hazardous materials team to secure and properly dispose of all items ensuring the safety of the surrounding residents.

Response Capsule



St. Louis County Brentwood 0902090900EJS

A State On-Scene Coordinator gives an on-site interview during an incident where a track hoe struck a natural gas pipeline resulting in serious concerns among area residents, businesses, and transportation facilities.

Response Capsule



DeKalb County Union Star 0902221055BWH

Highly radioactive isotopes were discovered in a barn on a farm of a deceased owner.

A State On-Scene Coordinator worked closely with numerous local, state and federal agencies to properly address this serious situation.

Response Capsule



Laclede County Lebanon 0902280930CMS

Slick road conditions were a factor in a tractor trailer crash that resulted in the loss of nearly 4,600 gallons of gasoline. The gasoline spread off the interstate right-of-way and onto private property resulting in extensive involvement by a State On-Scene Coordinator to make corrective actions.

Response Capsule



St. Louis City St. Louis 0903060315CRJ

A tractor trailer accident resulted in a release of diesel fuel to a storm sewer. The responsible party was unwilling to take corrective action. Therefore, a state hazardous materials response contractor was immediately mobilized and a State On-Scene Coordinator directed the cleanup activities.

Response Capsule



Macon County Elmer 0903081710DLT

A line on a newly installed storage tank at a farm broke releasing approximately 6,000 gallons of diesel fuel. A rain event further spread the diesel fuel, ultimately impacting the Chariton River before actions could be taken to contain the spill. A State On-Scene Coordinator spent a considerable amount of time overseeing the corrective actions at the site.

Response Capsule



Nodaway County Maryville 0903241200DLT

A State On-Scene Coordinator uses a ground penetrating radar to assist law enforcement with locating a body that was believed to have been buried as part of a homicide investigation.

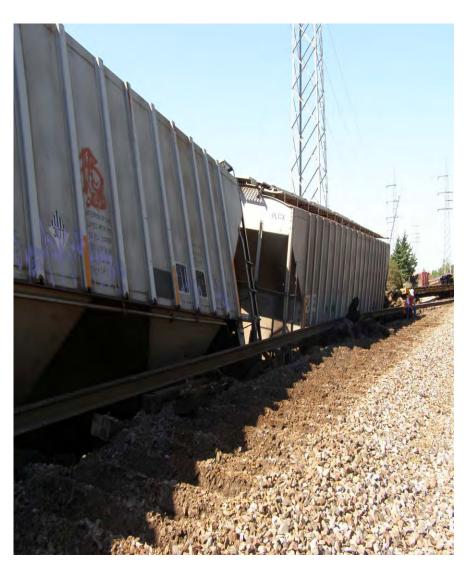
Response Capsule



Franklin County Washington 0905120625DLT

An unstable ballast led to a spectacular train derailment. Fortunately there were no injuries, release of diesel fuel, or hazardous materials. Approximately 3,000 tons of coal was strewn about with no waterways affected. A State On-Scene Coordinator responded to confirm the limited impact to the environment and the corrective action plan being employed by the railroad.

Response Capsule



St. Louis County Shrewsbury 0905291448BW H

Several rail cars loaded with a hazardous waste (furnace ash) derailed in a populated area. A State On-Scene Coordinator immediately responded to ensure the scene was secure and actions were underway to address the spilled hazardous waste.

Response Capsule



Dunklin County Kennett 0906080953SMC

A tractor trailer containing a liquid fertilizer overturned on the downtown square spilling the material on the street and into the sewer system. Citizens were evacuated and businesses closed as a result of the accident. A State On-Scene Coordinator responded quickly to assist local officials with the situation.

Response Capsule



Franklin County St. Clair 0906221430BDS

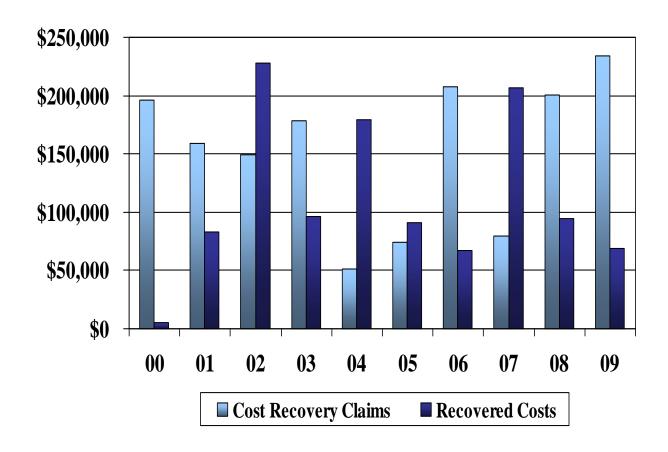
A State On-Scene Coordinator watches closely as actions are taken to address a spill of diesel fuel from a tanker truck that injured the driver and closed the interstate.

Cost Recovery

Local fire departments and hazardous materials teams that respond to hazardous substance releases may incur certain costs for resources expended during the emergency phase of an incident. Section 260.546, Revised Missouri Statutes, allows for reasonable and necessary costs incurred while securing or cleaning up a hazardous substance. Specific information regarding cost recovery may be found in a technical bulletin located at: http://www.dnr.mo.gov/pubs/pub2095.pdf.

Emergency Response may also seek cost recovery during a release of a hazardous substance. Section 260.530, Revised Missouri Statutes, allows for cost recovery for costs incurred by Emergency Response while securing or cleaning up a hazardous substance. The current minimum before Emergency Response seeks cost recovery from a responsible party is \$500. During this fiscal year Emergency Response sought to recover \$234,096 of which 29% has been received (attachment 12).

Attachment 12 – Cost Recovery Claims and Costs Recovered



Fiscal Year

Operations

Specially trained Emergency Response staff in the Field Services Unit provide field support to the department's Hazardous Waste Program.

This field support includes conducting sampling investigations at known, or suspected, hazardous waste sites and industrial facilities that may generate or store hazardous waste (attachment 13). In the course of conducting these field investigations, personnel use a variety of highly specialized equipment and tools to collect and/or analyze air, water, soil, sediment, and waste samples.

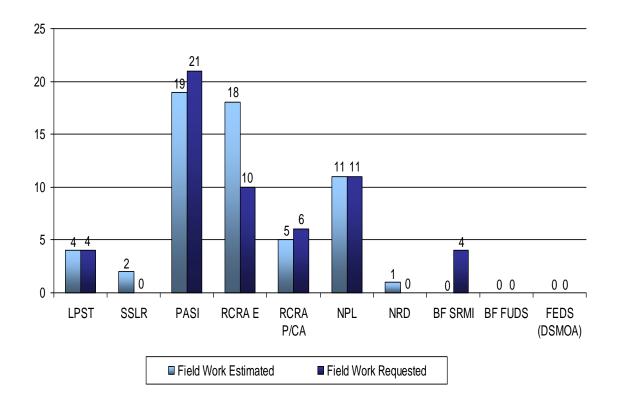
Most often, representative samples are collected and returned to the Environmental Services Program's State Environmental Laboratory for chemical analysis. The data generated is used by personnel within the Hazardous Waste Program to make sound decisions regarding the sites that fall within their regulatory universe.

During the fiscal year, 60 field events were estimated in 7 of 10 category areas when in actuality, 56 field events were requested in 6 of the 10 category areas (attachment 14). At the conclusion of the fiscal year, 59 requests were received for field work and 50 of these requests were completed (attachment 15).

Attachment 14 – Field Services Investigation/Sampling



Attachment 15 – Field Services Estimated Work/Requested Work



Leaking Petroleum Storage Tanks

Preliminary Assessment Site Investigation

RCRA Permits/Corrective Action

Natural Resources Damages

Brownfields Formerly Used Defense Sites

Superfund State Lead Registry

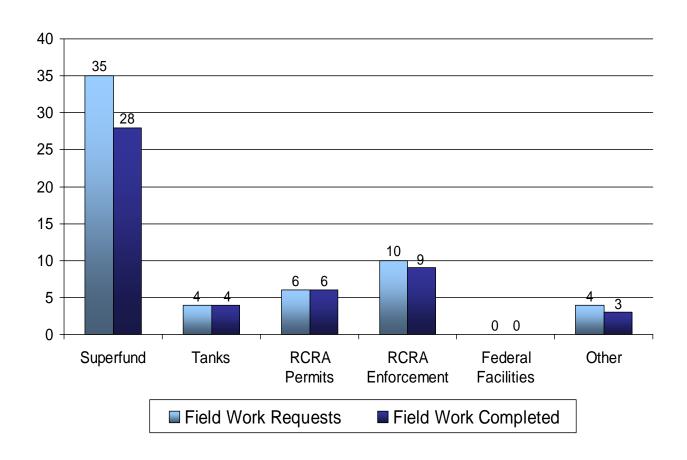
RCRA Enforcement

National Priorities List

Brownfields State Response and Mine Inventory

Federal Facilities Defense Site (Defense and State Memorandum of Agreement)

Attachment 16 – Field Services Work Requested/ Field Services Work Completed



History

As methamphetamine use and production escalated in Missouri in the early 1990's, law enforcement began requesting the service of Emergency Response to respond and assist with the management and control of seized and abandoned clandestine drug lab chemicals and debris and hazardous waste. With limited resources, Emergency Response and the Missouri State Highway Patrol partnered with numerous local, state and federal agencies to address this ever growing problem.

A task force was quickly formed and through innovative thinking, working together, pooling resources and the financial assistance of the Missouri Legislature, Emergency Response developed and administers the Clandestine Drug Lab Collection Station Program, the Supplies and Equipment Distribution Program, and the Health and Safety Training Program.

Clandestine Drug Lab Collection Station Program

Currently, 18 collection stations are operating statewide (attachment 16). The collection stations are operated by local agencies in the following locations: Maryville, Kansas City, Richmond, Grain Valley, Trenton, Kirksville, Palmyra, Troy, Union, Hillsboro, Sedalia, Osage Beach, Rolla, Jackson, Kennett, Poplar Bluff, West Plains and Joplin (attachment 17).

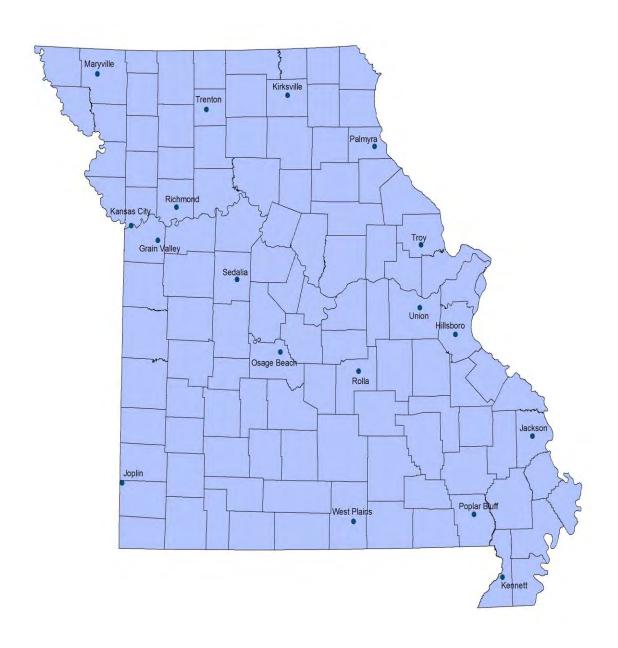
During this fiscal year, 1,047 meth labs (attachment 18) were processed at the collections stations resulting in 465 lbs. of corrosive materials neutralized, 2,168 lbs. of metal containers reused/recycled, 42 lbs. of material volatilized or otherwise consumed, 4,072 lbs. of hazardous waste disposed of properly, and 10,923 of solid waste disposed of at a sanitary landfill (attachment 19). During the last 10 years, Emergency Response Spill Line has received on average 1,278 reported meth lab incidents each year with the lowest coming in 2000 (457) and the highest coming in 2003 (2,317). These calls are generated from methamphetamine labs brought to collection stations (attachment 20).

Since October 1998, 12,354 methamphetamine labs have been processed accounting for 251,166 lbs. of solid waste, 118,562 lbs. of hazardous waste, 20,715 lbs. of neutralized materials, 63,680 lbs. of reused/recycled material, and 19,360 lbs. of materials volatilized or otherwise consumed.

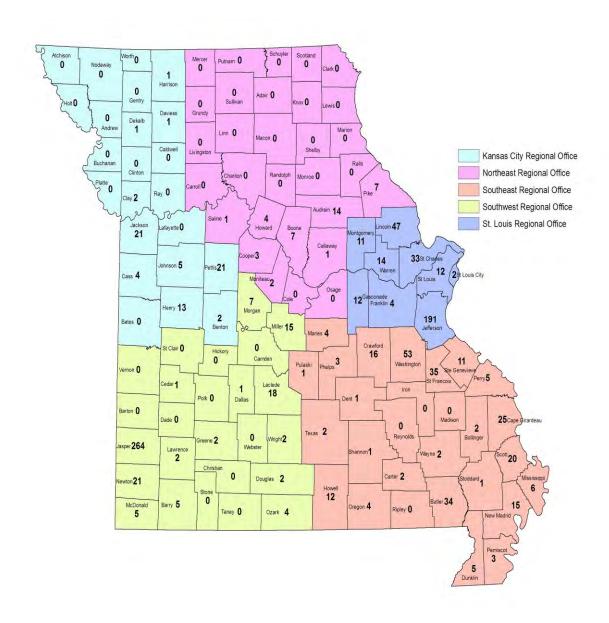
Attachment 17 – Clandestine Drug Lab Collection Station



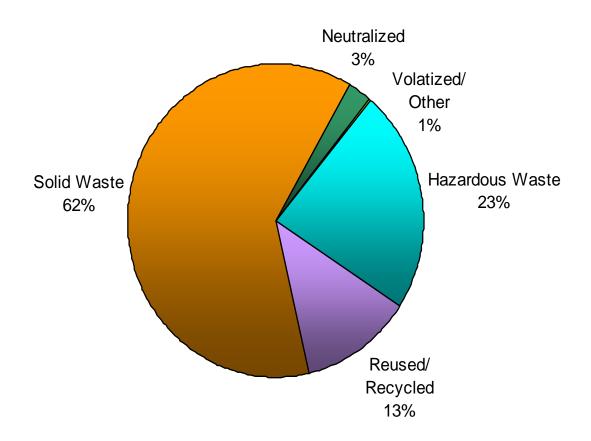
Attachment 17 – Clandestine Drug Lab Collection Station Location Map



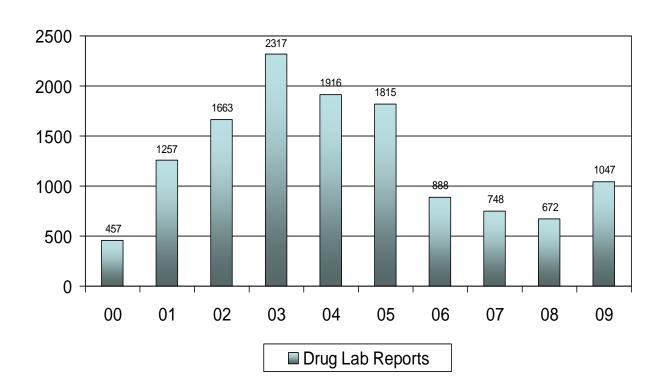
Attachment 18 – Fiscal Year 2009 Methamphetamine Lab Incident Map



Attachment 19 – FY2009 Methamphetamine Lab Materials Processed



Attachment 20 – Methamphetamine Lab Incidents Reported



Fiscal Year

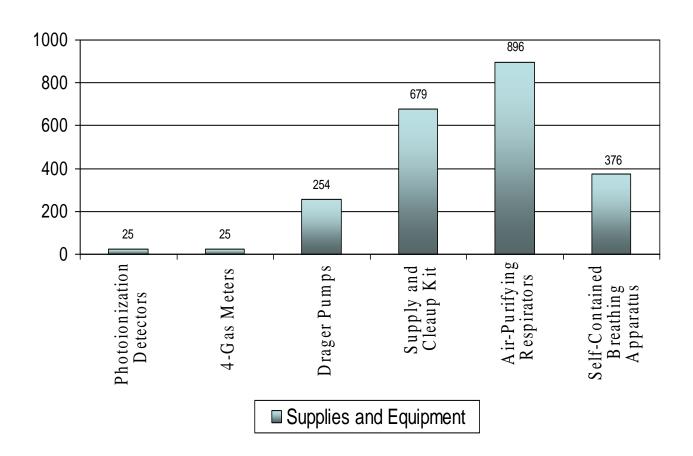
Supplies and Equipment Distribution Program

Items are provided at no cost to law enforcement agencies so that they may safely enter and dismantle or otherwise respond to meth lab incidents and to collection station operators so they may properly manage clandestine drug lab chemicals and debris.

Supply items provided include chemical protective coveralls, gloves and boot covers, overpacks and containers, pH paper, safety glasses and goggles, transportation labels, sample media, absorbent material, etc.

Equipment items provided include air monitoring instruments (Drager® pump/colormetric tubes, photoionization detector and 4-gas meter), air-purifying respirator and cartridges, and self-contained breathing apparatus (attachment 21).

Attachment 21 – Supplies and Equipment Distribution



Training Program

A variety of health and safety and hazardous materials training courses are offered that focus on methamphetamine-related issues (attachment 23). Training courses offered include:

40-hour Hazardous Waste and Emergency Response for Methamphetamine Laboratories

8-hour Hazardous Waste and Emergency Response for Methamphetamine Laboratories Re-certification

24-hour Site Safety Officer for Methamphetamine Laboratories

16-hour Field Screening for Methamphetamine Laboratories

6-hour Clandestine Drug Lab Collection Station Management Operations

6-hour Clandestine Drug Lab Collection Station Management Operations — Air Monitoring

Attachment 22 - Training



School Chemical Cleanout Project

Overview

Emergency Response, with the financial assistance of the department's Solid Waste Management Program, helped make many schools safer this past fiscal year by coordinating the removal of dangerous, unwanted, and unstable chemicals in the laboratories, classrooms, and storerooms. These outdated chemicals pose a significant public health and safety threat to students and faculty.

All of Missouri's public and private elementary, middle, vocational and high schools were encouraged to apply. The Center for Safe Schools and the Department of Elementary and Secondary Education also played a key role in the School Chemical Cleanout Project. This project was not intended to remove other wastes, such as industrial cleaners, floor waxes, paint or paint waste, thinners, road salt, pesticides, batteries, waste oil or other wastes from shop or agricultural classes.

School Chemical Cleanout Project

Overview

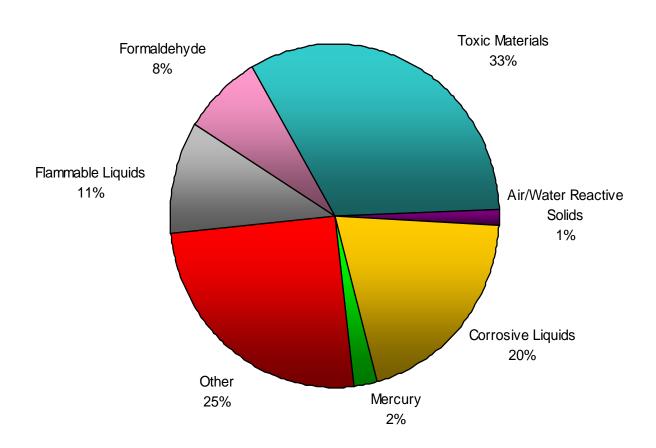
A total of 226 school districts participated in the School Chemical Cleanout Project with nearly 60,000 pounds of chemicals removed and disposed of properly. Toxic materials, flammable and corrosive liquids, formaldehyde, air and water reactive solids, mercury and other chemicals (aerosols, metal powders and other unregulated items) were the primary types of chemicals removed (attachment 23).

Schools that participated in the School Chemical Cleanout Project were required to complete an application, related forms, and a fee of \$100 as a hazardous waste generator. On average, approximately \$1,664 was spent at each of the 226 participating schools to dispose of the dangerous, unwanted, and unstable chemicals.



School Chemical Cleanout Project

Attachment 23 –School Chemical Cleanout Materials Collected



Mercury Cleanup Project

Overview

Emergency Response, with the financial assistance of the U.S. Environmental Protection Agency, Region VII, helped make many Missouri homes safer this past fiscal year by ridding them of mercury-containing instruments and elemental mercury.

The mercury cleanup was a month-long effort held in partnership with more than 90 local fire departments and county health offices throughout the state. These local agencies provided the drop off points for their communities. Emergency Response provided the necessary training, supplies, and news releases for the mercury cleanup. Any private citizen or non-profit agency could leave mercury-containing instruments, like thermometers, blood pressure cuffs, thermostats, or switches, at any of these sites.

After a local agency took receipt of a mercury containing device, it was immediately packaged and placed in unique buckets to prevent the possibility of breakage or accidental exposure.





Mercury Cleanup Project

Overview

Emergency Response then collected all of the buckets at the end of the month long effort and consolidated the items at the Environmental Services Program prior to a state contractor picking up the items whereby they were either recycled or disposed of in accordance with hazardous materials regulations.

In all, 509 thermometers, 34 medical devices, and 252 switches and 47 elemental mercury containers, equaling 226 pounds of elemental mercury, were collected (attachment 24).

Mercury Cleanup Project

Attachment 24 – Mercury Containing Instruments Collected

